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1. Purpose

What are the ways to happiness? Being well (healthy) and well-to-do (wealthy) are two commonly known factors for well-being. “Well fed, well bred” by Kuan Chung (c. 720-645 BC), a famous Chinese legalist and statesman, has also been a famous saying in Japan. This suggests that economics may be one of the key factors for happiness. However, everyone knows that wealth is not always sufficient to bring about happiness. Another important factor is the possession of a healthy state of mind. In this paper I will discuss the relationships between economics, psychology, and happiness using some data from the Global COE (Center of Excellence) Program “*Revitalizing Education for Dynamic Hearts and Minds*.” The hypotheses of this Program are as follows.

2. The hypotheses

In the 20th century, despite the rapid progress that was achieved in science, technology and industry, conflicts relating to poverty, crime, international disputes and wars, and environmental disruption became firmly entrenched as the major problems facing humanity. Unresolved tasks have been carried over to the societies of the 21st century at various levels, involving individuals, societies and the international community as a whole. In school settings, those who are involved in education, including parents and teachers, have been suffering from such adverse phenomena as school vandalism and violence, bullying, and children’s refusal to attend schools. They raise a serious question concerning the state of the human mind. Ideally speaking, the human mind should be revitalized through educational institutions and organizations. However, the same institutions often inadvertently torment human beings and enfeeble the mind.

Problems of mind should be investigated in various fields, especially in the field of education. In the contemporary society of advanced information, education cannot be limited to the narrow field of schooling. Rather it should be reconsidered from the perspective of life-long learning and development in a broader context of human life and in the extended horizon of time and space.

It is the function of education that human beings obtain *a sense of capability* through the acquisition of knowledge and skill, and *a vital sense of life* through connection with nature and society. Furthermore, by making full use of these senses in attaining a certain goal, they can obtain *a sense of achievement*. Simultaneously they can enjoy *a sense of happiness*. Conversely, if a part of, or the whole of, these interconnections does not function well, various problems arise. The power of education is

also applicable to solve these problems (Figure 1). In order to demonstrate this, I will focus in particular on people's sense of achievement, especially on the roles of future time perspective on people's sense of happiness adopting the concept of *net present value* from economics.

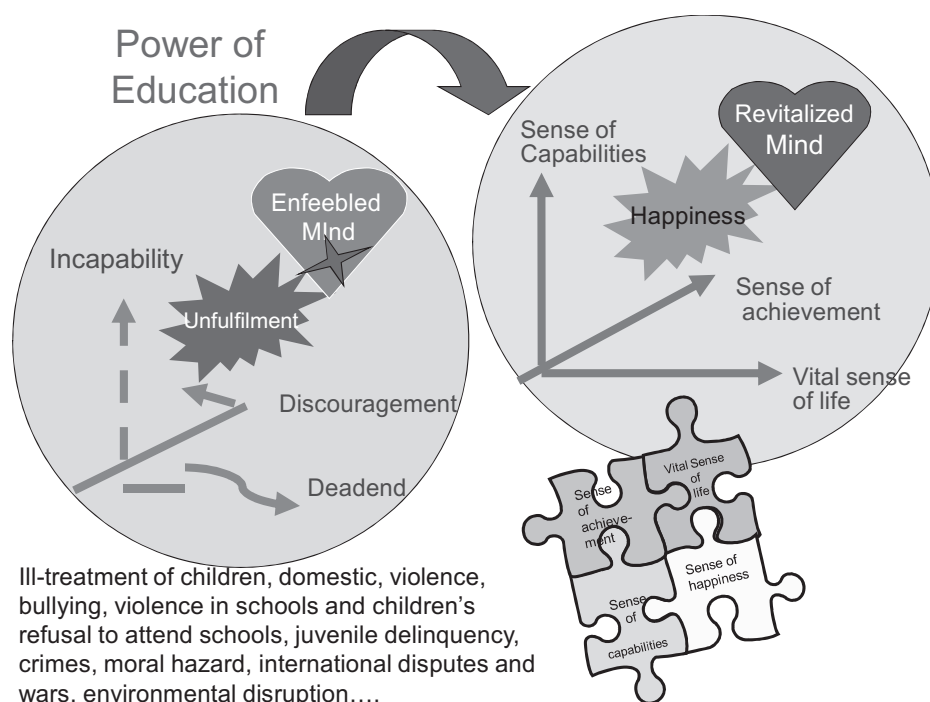


Figure 1 A schematic representation of components of happiness

3. Economics and ethics

This paper was originally presented at the 10th East-West Philosophers' Conference held at the University of Hawaii, Manoa, on the 21st of May, 2011. Its main theme was to "bring together philosophers from different cultures and with different perspectives to reflect upon a productive and sustainable relationship between economics and ethics." What are the relationships between economics and ethics? What are the factors which connect these two different academic areas? Historically, economics was considered as a *moral science*. It is well known that Adam Smith (1723-1790) was a developer of economics as a moral science. Smith entered the University of Glasgow when he was fourteen and studied moral philosophy under Francis Hutcheson (1694-1746). In 1759, Smith published his first book, *The theory of moral sentiments*, in which Smith suggested that conscience arises from social relationships and that the act of observing others makes people aware of themselves and the morality of their own behavior. Therefore, Smith was also a psychologist, though there was no such research area as psychology before Wilhelm Wundt (1832-1920) founded the first formal laboratory for psychological research at the University of Leipzig, Germany, in 1879.

Alfred Marshall (1842-1924) was famous for the words of his inaugural address as the first Professor of Economics at the University of Cambridge in 1885: “It will be my cherished ambition, my highest endeavor, ... to increase the number of those ... with *cool heads but warm hearts*, willing to give some at least of their best powers to grappling with the social suffering around them.” At first, Marshall became a lecturer in the moral sciences at the University of Cambridge in 1868. In 1885 he became professor of political economy at Cambridge where he remained until his retirement in 1908. Marshall created a new course for economics in 1903, which means he changed teaching economics under the historical and moral sciences to that of a more specialized scientific area. After Marshall, a number of leading economic theorists envisioned economics as a strict science, not a moral science. The decline of economics as a moral science lasted for a long time.

One of the most influential disciples of Alfred Marshall at the University of Cambridge was John Maynard Keynes (1883-1946). However, Keynes did not regard economics solely as a strict science. Rather, he learned moral philosophy from George Edward Moore (1873-1958), a Cambridge philosopher who is famous for the book *Principia Ethica* (Moore, 1903). For example, Keynes (1936) wrote about an imaginary beauty contest in order to explain the way people behave in the stock markets. According to Keynes, people do not vote for a contestant whom they themselves think is most beautiful, but tend to vote for a contestant whom they think other people would find most beautiful in order to increase the chance of winning the voter’s prize. The latter strategy needs “theory of mind” using psychological terminology (Perner, 1991). Keynes mentioned second-, third-, and even higher-order beliefs. I think that one of the most important enterprises by Keynes as a practical moral philosopher was undertaken when he was the financial representative for the British Treasury to the 1919 Paris Peace Conference after World War I. In the Conference, Keynes tried in vain to prevent Germany’s compensation payments being set so high. The consequences were that Germany’s economy was hurt by the heavy burden, German people suffered from hyperinflation in 1923, and that became one of the main causes of the rise of Adolf Hitler and Nazism.

Some modern economists have tried to reinstate economics as a moral science. The 1998 Nobel Prize in Economic Sciences (the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel) was awarded to Amartya Sen (1933-), an Indian economist at the University of Cambridge at that time, for his contribution to welfare economics. Welfare economics aims at studying economic well-being including equality as a dimension of welfare. Sen is well known for his work on the causes of famine. Sen (1982) wrote a book, *Poverty and famine*, showing famines were not simply caused by a shortage of food. It is known that a famine occurs when there is 15% less food available in a region than there was the year before. However, many human beings could survive on 15% less food. Therefore, the real mechanism that has led to large-scale starvation was not the distribution of food but that those who were starving did not have the means to get it and the government did not care about them. Japanese high-school students used to learn a famous saying by Mencius (372-289 BC), a Chinese philosopher who was the most famous and important disciple of Confucius: “An oppressive government is more feared than a tiger.”

One famous measurement is the Human Development Index (HDI) by the United Nations Development Program (UNDP). It was Sen's work on capabilities and functioning that provided the underlying conceptual framework of HDI, though Sen himself described this as a vulgar measure (cited from *Webster's Online Dictionary*). The 2010 HDI report combines three dimensions: 1) a decent standard of living; gross national income (GNI) per capita, 2) a long and healthy life; life expectancy at birth, and 3) access to knowledge; mean years of schooling. The 2010 HDI rankings are shown in Table 1. Japan is the eleventh.

Table 1 The United Nations Human Development Index (HDI) rankings for 2010

1. Norway	0.938	21. Hong Kong	0.862
2. Australia	0.937	22. Greece	0.855
3. New Zealand	0.907	23. Italy	0.854
4. United States	0.902	24. Luxembourg	0.852
5. Ireland	0.895	25. Austria	0.851
6. Liechtenstein	0.891	26. United Kingdom	0.849
7. Netherlands	0.890	27. Singapore	0.846
8. Canada	0.888	28. Czech Republic	0.841
9. Sweden	0.885	29. Slovenia	0.828
10. Germany	0.885	30. Andorra	0.824
11. Japan	0.884	31. Slovakia	0.818
12. South Korea	0.877	32. United Arab Emirates	0.815
13. Switzerland	0.874	33. Malta	0.815
14. France	0.872	34. Estonia	0.812
15. Israel	0.872	35. Cyprus	0.810
16. Finland	0.871	36. Hungary	0.805
18. Belgium	0.867	37. Brunei	0.805
19. Denmark	0.866	38. Qatar	0.803
20. Spain	0.863	39. Bahrain	0.801
		40. Portugal	0.795

A decent standard of living or GNI per capita is an important underlining factor that justifies the magnitude of ethics in the society. Japanese high-school students used to learn the saying “well fed, well bred” by Kuan Chung (?-645 BC) who was a Prime Minister of a small state during the Spring and Autumn Period of Chinese history. People with higher incomes are more likely to report being happy. However, in international comparisons, happiness is not a linear function of GNI per capita. This is called the *Easterlin paradox*, after Richard A. Easterlin (1926-), an American professor of economics (Graham, 2009).

Longevity or long life expectancy means that the water and food supply is enough, the health care system provides sufficient services, and disasters, wars and conflicts are scarce. If longevity is good, “longevity risk” seems to be an oxymoron combining two contradictory terms. Longevity can be a risk for pensioners who need to seek enough money to support their future life and health. I will discuss this matter later.

Education, access to knowledge, or the mean years of schooling is basically important. The quality of education is more important than the quantity of education (years of schooling, amount of knowledge, etc). Fostering critical thinking is one of the important goals for quality of education.

4. Economics and psychology

What are the relationships between economics and psychology? There is a research area called “economic psychology.” The International Association for Research in Economic Psychology (IAREP) was founded in 1982 in order to make a meeting point for researchers who are interested in the areas where psychology and economics intersect. Economic psychology is concerned both with the psychological mechanisms through which economic behavior comes about, and with the psychological effects of economic events (<http://www.iarep.org/whatisiarep.htm>).

There are two psychologists who have been awarded the Nobel Prize in Economics. One is Herbert Alexander Simon (1916-2001), an American psychologist who was awarded the 1978 Prize for his pioneering research into the decision-making process within economic organizations. The other Nobel Laureate is Daniel Kahneman (1934-), an Israeli-American psychologist who was awarded the 2002 Prize for having integrated insights from psychological research into economic science, especially concerning human judgment and decision-making under uncertainty. Why are their works so important? The key concept is human rationality.

Homo economicus has been the central dogma for the mainstream economists since the late 19th century, including Léon Walras (1834-1910), William Jevons (1835-1882), Francis Edgeworth (1845-1926), and Vilfredo Pareto (1848-1923), to mention but a few. The *Homo economicus* model assumes that human beings are rational self-interested actors who have the ability to make judgments on complete knowledge toward their subjectively defined goals, and that they know what is best for their well-being. The rational individuals seek to attain their goals to the greatest extent with the least cost, though it is not always the case that the goals themselves are rational in ethical, social, or human sense.

In contrast, Herbert Simon discussed the concept of organizational decision-making in terms of *uncertainty*, in other words, it is impossible to have complete information at any given time to make a decision. Though this notion was not entirely new, Simon was the first to discuss it extensively. Daniel Kahneman, especially in collaboration with Amos Tversky (1937-1966), demonstrated the tendency of people (including professional investors) to make risk-averse choices in gains, and risk-seeking choices in losses. People tend to be very risk-averse for small losses but indifferent for a small chance of a very large loss. Both Simon and Kahneman were skeptical about the rationality assumptions underlying economics: they stressed the importance of evidence in documenting violations of rational behavior, and they tried to provide underlying psychological mechanisms of people’s economic behaviors in connection with consumption, investment, inflation and deflation, taxation, unemployment, and so forth.

5. Future time perspective

One of the important research areas in psychology is *future time perspective* and its relationship to other psychological processes such as motivation, self-control, and intellectual and social development.

One famous method of studying development of future time perspective is to test a child's ability to delay gratification, which is known to the North American people as the Marshmallow Experiment conducted by American psychologist Walter Mischel (Mischel, Ebbesen, & Zeiss, 1972). In the experiment, a child was given one marshmallow, but promised two on condition that he or she could wait several minutes before eating the first marshmallow. Children who could wait for the delayed but bigger reward showed higher IQ score than those who could not. Two decades later, Shoda, Mischel, & Peake (1990) studied the development of each child into adolescence, and showed that young children (preschoolers) who had been able to delay gratification were psychologically better adjusted and scored significantly higher grades in the Scholastic Aptitude Test. Delay of gratification denotes a person's ability to wait in order to obtain a bigger reward. This intellectual attribute is called impulse control, and good impulse control is considered a positive personality trait, which Goleman (1996) indicated as an important component of emotional intelligence (EQ). People who lack the ability to delay gratification cannot calculate the net present value of future rewards and defer to near-term rewards of lesser value using the terms of economics.

Net present value is a central concept in discounted cash flow analysis in economics and a standard method for using the time value of money to appraise long-term projects. It is a measure of discounted cash inflow to present cash outflow to determine whether a prospective investment will be profitable. The measure net present value is used for capital budgeting, finance, accounting and so forth.

6. Why Japanese people do not feel happy

We have conducted a cross-cultural research on the sense of happiness, collecting data from six countries (Japan, Germany, England, New Zealand, U.S.A., Spain, and Mexico) using an online survey method with the help of an online research company. The participants for each country were 600 people, nearly the same number of males and females, ranging from adolescence to old age. Ninety-two items were included in the questionnaire. I will describe here only the results of the Satisfaction with Life Scale created by American psychologist Edward Diener (1946-), which is a basic and widely used tool to assess people's well-being (Diener, Emmons, Larsen, & Griffin, 1985; Diener, & Biswas-Diener, 2008). This scale contains only five items noted below, but is known and used as a very reliable and useful measure of well-being:

1. I am satisfied with my life.
2. The conditions of my life are excellent.
3. In most ways my life is close to my ideal.
4. If I could live my life over, I would change almost nothing.
5. So far I have gotten the important things I want in life.

Participants answered each item using a 5-point scale (5. strongly agree - 1. strongly disagree). The mean score on the five items was calculated for each country. The results have shown that Japanese people are most pessimistic and Mexican people are most optimistic with the other four countries (Germany, England, New Zealand, U.S.A., and Spain) located in-between (2). The same pattern of results, pessimistic Japanese and optimistic Mexican, is consistently found in other items or scales of our research.

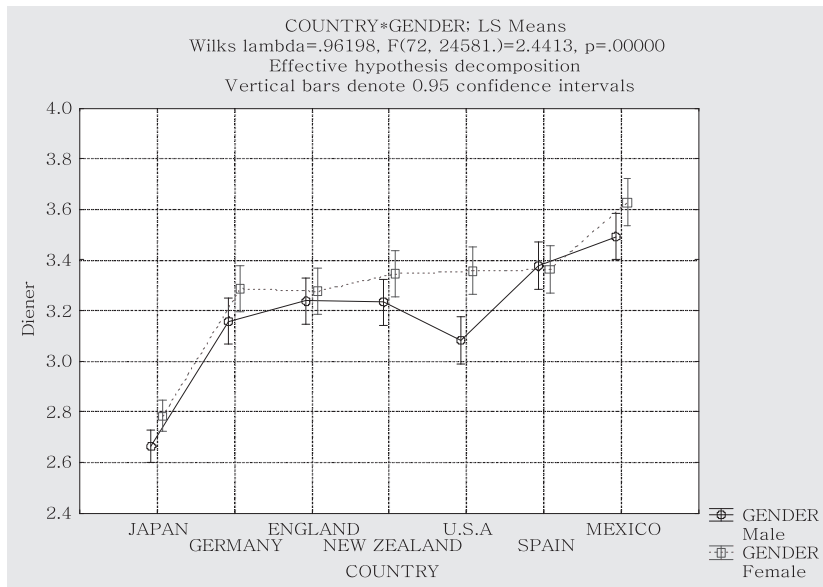


Figure 2 The results of the Satisfaction with Life Scale (Diener)

Why do Japanese people, both young and old, not feel very happy? It has been said that Japanese people have a tendency to report about themselves in a restrained manner. For Japanese, it is embarrassing to announce to people, other than within a very intimate group, that he or she is very clever, nice-looking, strong, healthy, rich, happy, and so forth. “Think of the weak” is a key concept in the Japanese way of life, because people always have chances to belong to the weak. *Mujo* in Japanese (*anitya* in Sanskrit) means that everything is changing and there is no eternal thing.

The retirement pension problem has been one of the most serious political issues in Japan. One of its sub-problems is that the Social Insurance Agency made several mistakes when they integrated three different databases together in 1997 and the errors were found in 2007. The problem of the bungled public pension-premium payment records was one of the reasons why the Liberal Democratic Party suffered a loss and a regime change occurred in the 2009 national election in Japan. However, it is very difficult for the ruling Democratic Party of Japan to solve the pension problem, because this is basically a structural problem generated from population aging.

Public Pension Schemes in Japan are composed of two state pension schemes (National Pension and Employees’ Pension Insurance) and three mutual aid pension plans (the National Public Service

Personnel, the Local Government Officials, and the Private School Personnel). The Japanese pension system is called *pay-as-you-go scheme*, in which no assets are built up in advance and revenues are directly used to finance current pension payments. In the year 1950, the population pyramid (two back-to-back bar graphs with the population plotted on the X-axis and age on the Y-axis showing the number of males on the left and females on the right) was a stable triangle figure. This population distribution by age is quite suitable for the pay-as-you-go scheme. In contrast, the population pyramid in 2010 looks like a barrel, which means that supporting young generations are shrinking and supported old generations are expanding year by year (Figure 3a-3d). The pay-as-you-go pension scheme would transfer income from the younger to the older generation. In 2009 the Japanese Ministry of Health, Labor and Welfare admitted that inequality between generations will expand in the future if we continue the on-going pay-as-you-go scheme, but claimed that the spirit of public pension system lies in mutual assistance between generations.

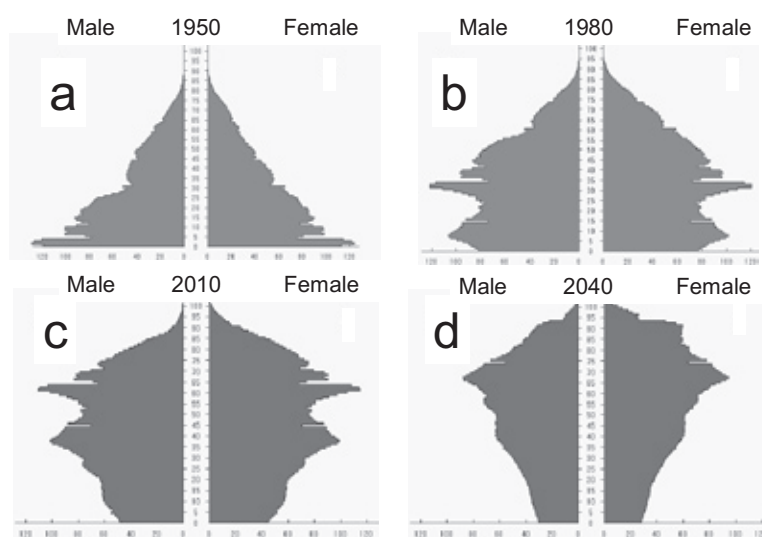


Figure 3 Population pyramid from 1950 to 2040
Source: National Institute of Population and Social Security Research

Inequality between generations caused by the pay-as-you-go pension scheme does *not* mean that senior citizens are very happy or happier than the younger generations, as our data have shown. Modern Japanese senior citizens face the *risk of longevity*: “How many more years will I live with or without disease and pain?” Or: “Will the amount of money I have saved for my retirement be enough to sustain the rest of my life?” It is difficult for them to calculate a net present value of their asset due to prolonged life expectancy. The propensity to save in the rich old generation is very high and this is one of the causes of weak domestic demand in Japan on the demand side. Some economists make the point that this high propensity to save is the true cause of Japanese recent deflation (Motani, 2010). Though this is an arguable hypothesis, it is true that deflation, a general decline in prices with a reduction in the supply of money or credit, is convenient for senior citizens who live on pension and savings only.

How about the younger generation? Why is it that young people do not feel happy, though they live in an affluent society? Canadian-American economist John Kenneth Galbraith (1908-2006) described American society in the 1950's as an affluent society, wealthy in the private sector but remaining poor in the public sector, and lacking strong social infrastructure (Galbraith, 1958). Compared to the American society in the 1950's, Japanese society today is richer and more mature, though there is much room for improvement concerning its infrastructures. One answer to the question above is that young people feel that their own net present value is low because of the seniority rule in the work place. *Nikkei Business* of March 14, 2011 had a special issue entitled “Middle and elderly people should give their seat.” The front cover of the Japanese magazine is a cartoon in which a bus full of middle and elderly people have just started while many young people are waiting in rows at the bus stop (Figure 4).



Figure 4 “Middle and elderly people should give their seat.”

Source: *Nikkei Business* of March 14, 2011

Actually a lot of young people are waiting for a full-time job in excellent or good companies, but can only find a part-time job with short period term. The number of part-time workers has increased in the past 20 years. It is difficult for them to calculate net present values because of their restricted time perspective.

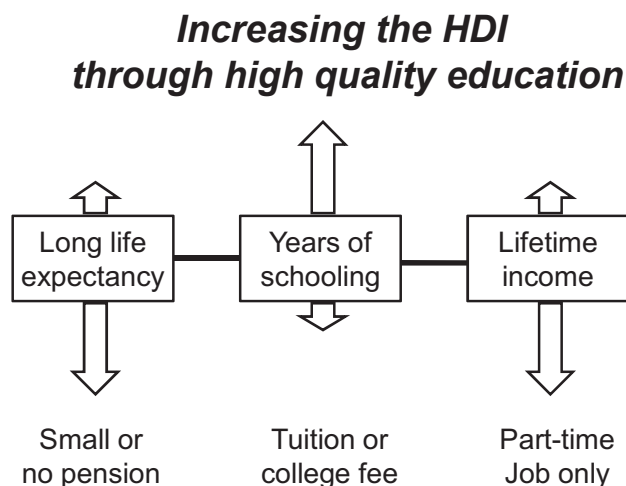
As is shown in Figure 5, 1) Long life expectancy with small or no pension, 2) many years of schooling with the payment for tuition or college fees, and 3) low lifetime income are factors which would lower Japanese people's HDI (the Human Development Index by UNDP). There are two opposite vectors in each factor.

“Long life expectancy” itself is the results of good water, food, clothing, housing, medical care, and so on. However, long life expectancy asks people for assets to support their long and even unhealthy lives. The point is that no one can estimate the total assets needed in the future because it is

difficult to anticipate how many years a person is likely to live in the future.

“Lifetime income” is one of the important factors for happiness. It is essential for ordinary people to get a full time job in order to acquire enough lifetime income. However, recently it has become much more difficult to obtain full time employment especially among young people.

Tony Blair (1953-), the Prime Minister of the United Kingdom from 1997 to 2007, gave a very famous speech at the 1996 Labor Party conference, “Ask me my three main priorities for government and I tell you education, education, and education.” We believe that the keys to open the deadlock in Figure 5 are exactly the same: education, education, and education.



**Figure 5 Balance of powers in HDI
(Human Development Index)**

7. Conclusions

In this paper I discussed the relationships between economics, psychology, and happiness. Economics was originally a moral philosophy which focused on some psychological processes of economic events. Nineteenth century economists tried to change the nature of economics from that of being a moral philosophy to that of a more specialized scientific area. Some of the twentieth century psychologists, such as Herbert Simon, Daniel Kahneman, Amos Tversky and so on, have tried to reinstate economics as a moral science with the help of psychological considerations. Considering these, happiness is a very important topic in both economics and psychology. Though Japanese people’s HDI (the Human Development Index by the United Nations Development Program) score is relatively high, they do not always feel happy. The 2010 HDI index includes a decent standard of living (GNI per capita), long life expectancy, and relatively high mean years of schooling. Long life expectancy causes the longevity risk. The seniority rule in the workplace changes the meaning of high GNP per capita. Young people find it difficult to get permanent jobs. Years of schooling depends on considerable amounts of tuition and

college fees. This paper has tried to show that the key to opening this deadlock is therefore to raise the quality of education which in turn will increase a person's possibility of getting a permanent job, raise the GNI per capita of Japan, and make Japanese people happier.

[Acknowledgments]

This paper was presented at the 10th East-West Philosophers' Conference, University of Hawaii, Manoa, on the 21st of May, 2011. I am grateful to Dr. Masato Ishida for inviting me to the Conference. I would also like to express my gratitude to Prof. Emmanuel Manalo for reading and providing comments to an earlier draft of this paper.

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This paper aims to discuss the relationships between economics, psychology, and happiness. Economics was originally a moral philosophy which focused on some psychological processes of economic events. However, nineteenth century economists tried to change the nature of economics from that of being a moral philosophy to that of a more specialized scientific area. Some of the twentieth century psychologists have tried to reinstate economics as a moral science with the help of psychological considerations. One of the important results is the HDI (Human Development Index). Though Japanese people's HDI is relatively high, they do not always feel happy. The 2010 HDI includes a decent standard of living (GNI per capita), long life expectancy, and relatively high mean years of schooling. However, long life expectancy causes the longevity risk. The seniority rule in the workplace changes the meaning of high GNP per capita. Young people find it difficult to get permanent jobs. Years of schooling depends on considerable amounts of tuition and college fees. The key to opening this deadlock is therefore to raise the quality of education which in turn will increase a person's possibility of getting a permanent job, raise the GNI per capita of Japan, and make Japanese people happier.